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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (currently amended) A first-order crossover network for dividing an input audio signal~~s~~ into high and low frequency bands at a crossover frequency in a loudspeaker system having first and second loudspeakers having respective impedance, each loudspeaker having positive and negative terminals, the first-order crossover network comprising:

a first component of the input audio signal coupled to the first loudspeaker to form a low-pass filter for providing the first loudspeaker low frequency band signals; and a second component of the input audio signal coupled to the second loudspeaker to form a high-pass filter for providing the second loudspeaker high frequency band signals, wherein the low-pass and the high-pass filters are first-order filters and wherein the first component is coupled in series to the first loudspeaker connected in a first polarity, the second component is coupled in series to the second loudspeaker connected in a second polarity, and the second polarity is an inverse of the first ~~priority~~ polarity, and impedances of the first and second components are selected such that a phase difference at the crossover frequency between respective responses of the first and second loudspeakers is no greater than 60 degrees.

2. (original) The crossover network of claim 1, wherein the responses are acoustic responses.

3. (original) The crossover network of claim 1, wherein the responses are electrical responses.

4. (canceled).

5. (currently amended) The crossover network of claim [4] 1, wherein the first component is an inductor, the second component is a capacitor, and impedance of the inductor and the capacitor is selected such that the phase shift for each filter is no less than 60 degrees.

6. (original) The crossover network of claim 5, wherein the input audio signals are equalized to flatten combined response of the first and second loudspeakers.

7. (original) The crossover network of claim 6, wherein the combined response at the crossover frequency is raised.

8. (original) The crossover network of claim 7, wherein the combined response at the crossover frequency is raised by about 4.5 decibels.

9. (original) The crossover network of claim 1, wherein combined response of the first and second loudspeakers is no greater than -6 decibels.

10. (original) The crossover network of claim 9, wherein the combined response is no less than -10 decibels.

11. (currently amended) The crossover network of claim 1, wherein the phase difference is between 38 and 40 degrees.

12. (currently amended) A loudspeaker system comprising:

first and second loudspeakers having respective impedances, each loudspeaker having positive and negative terminals; and

a crossover network, being a first-order network, for dividing an input audio signals into high and low frequency bands at a crossover frequency, the crossover network including first and second components respectively coupled to the first and second loudspeakers to form respective low-pass and high-pass filters for providing the low and high frequency band signals to the respective first and second loudspeakers, wherein the low-pass and high-pass filters are first-order filters and wherein the first component is coupled in series to the first loudspeaker connected in a first polarity, the second component is coupled in series to the second loudspeaker connected in a second polarity, and the second polarity is an inverse of the first ~~priority~~ polarity, and the impedance of the first and second components is selected, such that a phase difference between respective responses of the first and second loudspeakers is no greater than 60 degrees at the crossover frequency.

13. (original) The loudspeaker system of claim 12, wherein the responses are acoustic.

14. (original) The loudspeaker system of claim 13, wherein the responses are electrical.

15. (canceled).

16. (currently amended) The loudspeaker system of claim ~~15~~ 12 wherein the first component is an inductor, the second component is a capacitor, and impedance of the inductor and the capacitor is selected such that the phase shift for each filter is no less than 60 degrees.

17. (original) The loudspeaker system of claim 16, further comprising an equalizer for equalizing the input audio signals to flatten combined response of the first and second loudspeakers.

18. (original) The loudspeaker system of claim 17, wherein the combined response at the crossover frequency is raised.

19. (original) The loudspeaker system of claim 18, wherein the combined response at the crossover frequency is raised by 4.5 decibels.

20. (original) The loudspeaker system of claim 14, wherein combined response of the first and second loudspeakers is no greater than -6 decibels.

21. (original) The loudspeaker system of claim 20, wherein the combined response is no less than -10 decibels.

22. (currently amended) A method for generating output signals from a loudspeaker system having first and second loudspeakers, the method comprising the steps of:

passing an audio signal~~s~~ to a first-order crossover network including low-pass and high-pass filters;

coupling the low-pass filter to the first loudspeaker connected in a first polarity, and coupling the high-pass filter to the second loudspeaker connected in a second polarity, wherein the second polarity is an inverse of the first polarity; and selecting impedances of the first and second filters, such that each filter has a frequency response of no greater than -6 decibels at a crossover frequency, and a phase difference at a crossover frequency of output signals of the low-pass and high-pass filters is no greater than 60 degrees.

23. (original) The method of claim 22, further comprising the step of equalizing input signals to equalize responses of the loudspeaker system.

24. (currently amended) The method of claim 23, wherein the phase difference is between 38 and 40 degrees.

25. (original) The method of claim 23, wherein impedance of the first loudspeaker is the same as impedance of the second loudspeaker.

26. (original) The method of claim 23, wherein the impedance of the first and second loudspeakers is different.